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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,963	11/21/2003	Joseph M. Starita	3994648-129161C	4418
7590	07/13/2006			
			EXAMINER	
			DANIELS, MATTHEW J	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)
	10/718,963	STARITA, JOSEPH M.
	Examiner	Art Unit
	Matthew J. Daniels	1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 April 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 6-9 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 6-9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

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DETAILED ACTION

1. In the response received 25 April 2006, Claims 6 and 9 were amended. There are no new claims.

Claim Rejections - 35 USC § 102

2. Rejections set forth previously under this section are withdrawn in view of the amendment to Claim 9.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

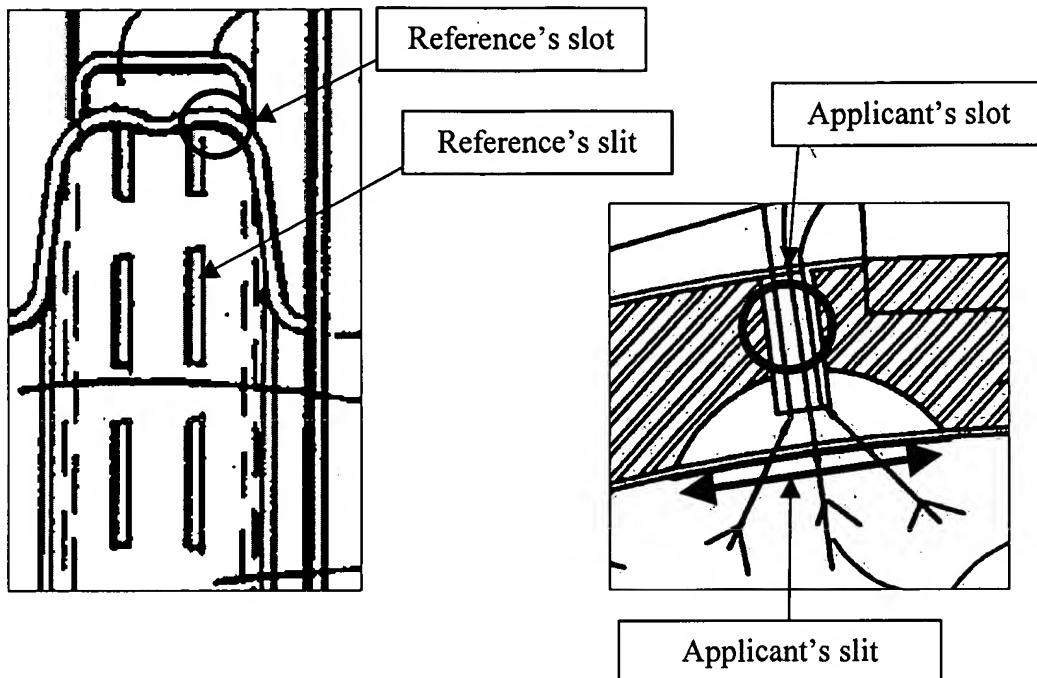
3. **Claims 6-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickhut (USPN 4718844). As to **Claim 6**, Dickhut teaches a method for delivering uniform vacuum pressure in the process of thermoforming a corrugated plastic pipe in a mold, comprising the steps of:

a) providing at least one vacuum port (3:33-53) connected to a manifold located on an external lateral surface of the mold (Fig. 3, Item 28), the channel being axially concentric with a corrugation located on an internal lateral surface of the mold (Fig. 3, Item 34), the width of the manifold corresponding approximately to the width of the corrugation (Fig. 3, Item 34);

- b) forming an air-tight manifold by providing an outer cover on the external lateral surface (See Fig. 2, Items 22, 28, 42), the manifold being ported to a plurality of slits formed in the corrugation in the mold (Fig. 3, Item 28);
- c) connecting vacuum source to said at least one vacuum port (3:33-53); and
- d) exerting an essentially uniform negative pressure on each one of the plurality of slits.

In a first interpretation, Dickhut appears to be silent to the claimed slots. However, the Examiner submits that the claimed slots are an apparatus limitation which does not materially affect the claimed method because Dickhut clearly applies vacuum through the slits (Fig. 3, Item 28), which would cause the plastic to conform to the corrugation in the same way as claimed in the instant application. The claimed *method* therefore appears to be *prima facie* obvious over Dickhut.

In a second interpretation, Dickhut teaches that the mold wall contains slits (Item 28 in Fig. 3), and also that the mold wall contains grooves that are interpreted to be slots. See the portions of Dickhut's Fig. 3 and Fig. 3C from the instant application.



Left: Portion of Figure 3 from USPN 4718844 to Dickhut.

Right: Applicant's Figure 3C.

The Examiner asserts that in the first interpretation, Dickhut's method of delivering "uniform vacuum around the mold tunnel" (3:52-53) using substantially the same slits (Fig. 3, Item 28) as shown Item 5 in Figure 4 renders obvious the claimed method, the only difference being the configuration of the apparatus, which does not produce a materially different result or manipulative difference from Dickhut's "uniform vacuum around the mold tunnel" (3:52-53). In the alternative, Dickhut teaches portions that can be interpreted to be the same as the slits and slots of the instant application, and it would be implicit that they would fulfill the relative change in negative pressure. As to Claim 7, each of Dickhut's openings or slits has the same width (Fig. 3, Item 34 or 28). As to Claim 8, the Examiner submits that the particular pressure ratio claimed would not produce a materially different process or result than the method of Dickhut

because Dickhut also applies vacuum through slits, and would cause the plastic to conform to the corrugations in the same way as that in the instant application. Therefore the claimed method is *prima facie* obvious over Dickhut's teaching of applying vacuum to the slits to cause the plastic to conform to the corrugations. **As to Claim 9**, Dickhut teaches a method for efficiently removing heat during thermoforming a corrugated plastic pipe in a mold comprising the steps of:

- a) providing a mold for forming a corrugated pipe having an external lateral surface and an internal lateral surface, the mold is axially concentric with a corrugation located on the internal lateral surface (Fig. 3 and 3:15-53);
- b) forming an air-tight manifold by providing a first cover on the external lateral surface, the manifold being ported to a plurality of slits in the corrugation (3:15-53 and Fig. 2, Items 22, 28, 42);
- c) providing at least one vacuum port connected to the manifold located on the external surface of the mold (See Figs. 1 and 2)
- d) providing a second cover that forms an outer circumferential duct between the channel and said second cover (4:1-23);
- e) connecting a source of high velocity cooling air to an opening in the second cover (4:1-23 and Fig. 1, Item 72); and
- f) forcing a turbulent flow of cooling air through the duct (4:1-23).

Dickhut is silent to the portion of step b) which reads "and having a depth and a width, wherein the depth is greater than the width;" However, Dickhut defines the channel members (Item 34) as "U-shaped troughs", and the Examiner asserts that this would include all troughs having a U-

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shape. For example, the capital "U" which Dickhut uses to indicate the shape of the troughs has a depth greater than its width.

4. **Claims 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickhut (USPN 5059109). As to **Claim 6**, Dickhut teaches a method for delivering uniform vacuum pressure in the process of thermoforming a corrugated plastic pipe in a mold, comprising the steps of:
 - a) providing at least one vacuum port (Fig. 2, Item 42) connected to a channel located on an external lateral surface of the mold (Fig. 4, Item 40), the channel being axially concentric with a corrugation located on an internal lateral surface of the mold (Fig. 4, Item 40), the width of the channel corresponding approximately to the width of the corrugation (Fig. 4, Item 40);
 - b) forming an air-tight manifold by providing an outer cover on the external lateral surface (See Fig. 4, portions radially outside of Item 40), the manifold being ported to a plurality of slits formed in the corrugation through a plurality of slots in the mold (Fig. 4, Items 20 and 34);
 - c) connecting vacuum source to said at least one vacuum port (Fig. 1, Item 46); and
 - d) exerting an essentially uniform negative pressure on each one of the plurality of slots (inherent in that each slot appears to have the same cross sectional shape and area).

Dickhut appears to be silent to the slots having a large cross-sectional area relative to the aggregate area of the slits and exerting negative pressure such that the change in negative pressure across the slots is small relative to the change in negative pressure across the slits. However, the Examiner submits that by the obvious similarity between the apparatus of Dickhut and the instant apparatus, that these limitations would be obvious. However, the Examiner

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additionally submits that these apparatus limitations would not distinguish the instant apparatus from that of Dickhut because Dickhut appears to disclose the same process, namely applying vacuum through the slots and slits (Fig. 4, Items 20 and 34), which would obviously cause the plastic to conform to the corrugation in the same way as claimed in the instant application. As to **Claim 7**, each of Dickhut's openings or slits has the same width (Fig. 3, Item 18). As to **Claim 8**, the Examiner submits that the particular pressure ratio claimed would not produce a materially different process or result than the method of Dickhut because Dickhut also applies vacuum through slits, and would cause the plastic to conform to the corrugations in the same way as that in the instant application. Therefore the claimed method is *prima facie* obvious over Dickhut's teaching of applying vacuum to the slits to cause the plastic to conform to the corrugations.

Response to Arguments

5. Applicant's arguments filed 25 April 2006 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

- a) Dickhut ('844) does not anticipate Claim 9 because Dickhut's channel members have a width that is greater than its depth, which is contrary to Applicant's manifold and teaches away from the claimed method.
- b) In response to the rejection of Claims 6-8, the Examiner's conclusion's are unfounded and the Examiner must show prior art references that teach or suggest all the claim limitations.
- c) Dickhut is void of any teaching of the exerting a negative pressure on each of the slots because Dickhut does not teach the slots. The Examiner does not address the slots, or provide any reasoning or evidence as to how these are taught by Dickhut.

6. These arguments are not persuasive for the following reasons.

a) When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. See *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) and MPEP 2125. In this case, the Examiner's position is that Dickhut teaches that any "U" shape can be used, and additionally that a "U" by the physical shape of the letter has a depth greater than its width, and still renders obvious the new claim limitation.

b and c) To be entitled weight in method claims, recited structural limitations must affect the method in a manipulative sense and not amount to mere claiming of a use of a particular structure. See *Ex parte Pfeiffer* 135 USPQ 31 (BPAI 1961). In this case, the Applicant's arguments appear to be drawn only to the use of a particular structure. Dickhut clearly teaches delivering "uniform vacuum around the mold tunnel" (3:52-53) using substantially the same slits (Fig. 3, Item 28) as shown Item 5 in Figure 4. The Examiner asserts that the plastic pipe would experience substantially the same effect in both the method of Dickhut and the instant method, and therefore the claimed method is not patentably distinct. What manipulative difference is provided by the claimed apparatus? Also note that arguments of counsel cannot take the place of evidence in the record. See *In re Pearson*, 494 F.2d 1399, 1405, 181 USPQ 641,646 (CCPA 1974).

Additionally, Dickhut teaches in Fig. 3 two channels within each corrugation that are also interpreted to be slots, further rendering obvious the claimed apparatus limitations in this method claim.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 7/7/06




CHRISTINA JOHNSON
PRIMARY EXAMINER

7/10/06